

Steve Hahn

June 19, 2006

All Experimenters' Meeting



### Store Summary (06/12-06/19)

Store	Start Date	Duration (hours)	Initial Instantaneous Luminosity (10 <sup>30</sup> cm <sup>-2</sup> s <sup>-1</sup> )	Delivered Integrated Luminosity (pb-1)	Live Integrated Luminosity (pb <sup>-1</sup> )	Good Run with Silicon (pb-1)	Notes
4759 Normal	06/12 Mon	17.0	29.3	1.1	0.6 60.0%	0.0 0.0%	Many short runs
4760 Abort	06/13 Tues	17.3	54.8	1.8	1.6 89.4%	0.0+ 0.0%	CLC (and thus accounting) problems
4772 Abort	06/15 Thur	27.9	68.1	2.2	0.8 29.4%	0.05 1.9%	Short silicon run; TOF HV scans at end
4774 Abnorm	06/16 Fri	4.0	103.2	1.1	0.3 28.1%	0.3 28.1%	L2 cluster problems
4778 Normal	06/17 Sat	22.3	58.6	2.0	1.6 77.2%	0.8 38.9%	SVT & COT TDC problems
4781 Now	06/19 Mon	14.0+	106.7	2.9	2.1 74.9%	1.2 40.3%	TOF HV problems
Total		102.8		11.8	8.6 72.4%	2.0 16.9%	



- **▼** Tests of remote shift (consumer operator) from Pisa
- ► Transition from Red Hat Linux (RH) to Scientific Linux (SL) for L3 farm
  - ➤ Input and output nodes have been SL for some time
  - ➤ Moving processor nodes to SL
  - ➤ Tests done over course of week
  - ➤ Offline validation in progress
- **►** Work on stereo XFT (fast tracker)
- **►** Work on SVT (silicon trigger)
- ► Work on consumers: many empty plots now reduced to handful
- ► Work on calibrating CLC (Cerenkov luminosity counters) over week:
  - ➤ New PMTs and relocated PMTs meant gains (and thus lum) too high earlier in week
  - ➤ Tuning gains and thresholds to optimize MIPS peak detection
  - ➤ Still not perfect—at least one noisy (afterpulsing?) PMT

# CDE

## CDF Operations

#### ► Store 4759

- ➤ Some consumer crashes, fixed later in week
- ➤ Hot endwall trigger tower eventually traced to electronics lookup table problem and fixed
- ➤ Problems with beam loss and sync light mean no silicon this store; fixed in next two stores
- ➤ COT:
  - Current trip limits set as function of luminosity; luminosity to PC not sent, so COT trip; fixed next store
  - $\rightarrow$  x (cm) = -0.08 to -0.18
  - $\rightarrow$  y (cm) = +0.18 to +0.04
  - $\rightarrow$  dx/dz = 6.25 x 10<sup>-4</sup> to 8.3 x 10<sup>-4</sup> (bad)
  - $\rightarrow$  dy/dz = 2.08 x 10<sup>-4</sup> to 0 x 10<sup>-4</sup>
- ➤ Some muon chamber trips throughout course of week
- > Tev studies at end



#### ► Store 4760

- ➤ Initial luminosity  $1.9 \times 10^{30}$ , but after helix tuning and rescraping, went up to  $5.5 \times 10^{30}$  (accounting problem)
- ➤ Silicon cooling without active electronics drove COT temperature too low, turned off
- > Sync light rises throughout night, experts clean abort gaps by tuning electron lens orbit
- ➤ Silicon put in for first time; 10 minutes later TeV abort due to A0 coasting beam valve

#### ► Store 4772

- > Put in silicon within hour of start of store
- ➤ Did tests of SL vs. RH in L3 farm
- Some silicon readout problems and rising losses resulted in removing silicon
- ➤ Next morning after loss cleanup and silicon cooldown, silicon put back in, but SVT errors result in pulling silicon again
- ➤ Again, end with TeV studies



#### ► Store 4774

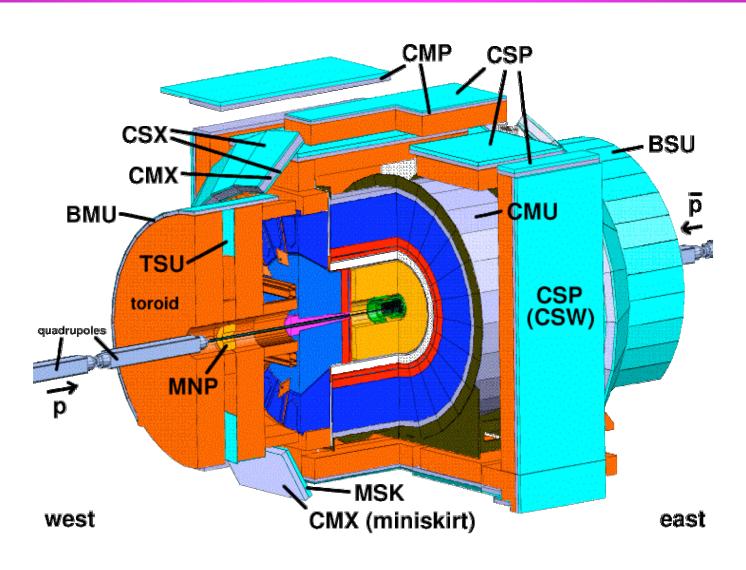
- ➤ Silicon put in run at start
- ➤ Problems with AC chillers resolved next morning
- ➤ Ends without quench

#### ► Store 4778

- ➤ COT TDC problem means one card temporarily out of run (not sufficient to mark run bad for COT); later, came back with low error rate
- ➤ Some problems with SVT generating ERROR to trigger supervisor



### CDF Run IIB Detector



7



### CDF Run IIB Detector (inner)

